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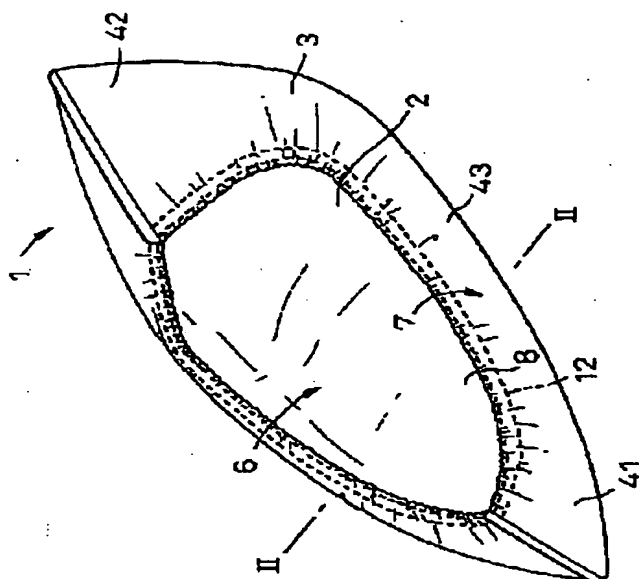
Epitome

(57) [Abstract]

[Technical problem] Offer of the disposable body fluid processing supply which has a suitable opening to hold the excreted facilities.

[Means for Solution] The body fluid processing supply 1 which has the opening 8 surrounded by the cover sheet portion 7 above the body fluid absorption section 6 has the front end section 41, the back end section 42, and these both ends 41 and the pars intermedia 43 in which it is located among 42 in a longitudinal direction, and it is formed so that width of face may become the largest in pars intermedia 43.

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CLAIMS

[Claim(s)]

[Claim 1] A liquid permeability inner surface sheet The body fluid absorption section is formed of a non-liquid permeability outside surface sheet and an absorptivity core which intervenes among both [these] sheets. It extends so that a cover sheet portion which makes at least one side of said inside-and-outside side sheet and one may cover an inner surface of this periphery portion from the upper part along with a periphery portion of said absorption section. A opening surrounded by said cover sheet portion is formed in the upper part for a center section of said absorption section, said cover sheet portion meets an edge of said opening, and it is elastic elasticity. It is said supply equipped with the above, and is characterized by for said absorption section having a cross direction and the cross direction which intersects

this direction, and forming in said cross direction the front end section, the back end section, and pars intermedia located among these both ends, and being formed so that width of face of said absorption section may become the largest in said pars intermedia.

[Claim 2] Said absorption section is a supply according to claim 1 currently formed from said forward back end section so that said width of face may become large gradually toward said pars intermedia.

[Claim 3] Said pars intermedia is a supply according to claim 1 or 2 with which said width of face is the largest by part from said back end section.

[Claim 4] A supply according to claim 1 with which said forward back end section is covered with said cover sheet portion.

[Claim 5] A supply according to claim 1 to 4 with said elastic member and cover sheet able to form a cross section of an about T character mold, when a band-like elastic member whose width of face is 5-50mm is attached in a edge of said opening, said cover sheet joins to a crosswise center section under [said] an elastic member in said pars intermedia and said supply is worn.

[Claim 6] A liquid permeability inner surface sheet characterized by providing the following, and a non-liquid permeability outside surface sheet, The body fluid absorption section is formed of an absorptivity core which intervenes among both [these] sheets. It extends so that a cover sheet portion which makes at least one side of said inside-and-outside side sheet and one may cover an inner surface of this periphery portion from the upper part along with a periphery portion of said absorption section. A manufacture method of a disposable body fluid processing supply that a opening surrounded by said cover sheet portion is formed in the upper part for a center section of said absorption section, and said cover sheet portion has elastic elasticity along an edge of said opening a. A process which covers said core with said inner surface sheet and outside sheet, joins said inside-and-outside side sheet in a portion which extends from a periphery of said core, and obtains a layered product b. A process which joins an elastic member to the edges-on-both-sides section which is concurrent on both sides of said core of one of said inside-and-outside side sheets in the shape of a straight line in the state of expanding c. A process which ****s said inner surface sheet inside and turns up said layered product so that the elastic members of said edges-on-both-sides section may overlap d. a process which joins said turned-up layered product along with two imaginary lines which intersect said edges-on-both-sides section, and are mutually concurrent on both sides of said core, and e. — a process which shrinks said elastic member after said process d

[Claim 7] A manufacture method according to claim 6 which said elastic member is the band-like thing which has width of face which is 5-50mm, and joins this member to said edges-on-both-sides section in a crosswise interstitial segment.

[Claim 8] A manufacture method according to claim 6 or 7 that a means for attaching said supply firmly to clothes includes a process formed in said outside

sheet.

[Claim 9] A liquid permeability inner surface sheet A non-liquid permeability outside surface sheet The body fluid absorption section is formed of an absorptivity core which intervenes among both [these] sheets. It extends so that a cover sheet portion which makes at least one side of said inside-and-outside side sheet and one may cover an inner surface of this periphery portion from the upper part along with a periphery portion of said absorption section. In a continuous manufacture method of a disposable body fluid processing supply that a opening surrounded by said cover sheet portion is formed in the upper part for a center section of said absorption section, and said cover sheet portion has elastic elasticity along an edge of said opening a. A process which supplies continuously each of the 2nd web for forming the 1st web and said outside sheet for forming said inner surface sheet to an one direction b. A process which supplies an elastic member to said one direction continuously, and is joined to the edges-on-both-sides section of one of said the 1st and 2 webs in the shape of a straight line in the state of expanding c. a process which supplies said core to a crosswise central region of one of said the 1st and 2 webs intermittently in said one direction, and d. — after supplying said elastic member and core, said core is covered in the shape of sandwiches — as — said the 1st and 2 web — superposition, these the 1st and 2 webs, an elastic member, and a core It is said manufacture method equipped with the above, and is characterized by including a process cut so that a part joined to each of both sides bordering on this imaginary line at said process f may remain selectively along with an imaginary line prolonged crosswise [of said 3rd web], and a process which shrinks said elastic member after the h. aforementioned process g.

[Claim 10] A manufacture method according to claim 9 which said elastic member is the band-like thing which has width of face which is 5-50mm, and joins this member to said edges-on-both-sides section in a crosswise interstitial segment.

[Claim 11] A manufacture method according to claim 9 or 10 that a means for attaching said supply firmly to clothes includes a process formed in said 2nd web.

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DETAILED DESCRIPTION

[Detailed Description of the Invention]**[0001]**

[The technical field to which invention belongs] This invention relates to the manufacture method of a suitable disposable body fluid processing supply to use it combining a disposable diaper, disposable incontinentia trousers, etc.

[0002]

[Description of the Prior Art] The method of forming elastic opening in the skin reliance upper surface sheet of a disposable diaper is indicated by JP,5-293138,A. Besides with the field sheet, the elastic member describes the arc in the state of expanding along the edge of a opening. While pouring continuously the sheet for using it as an upper surface sheet, an arc can be made to draw on an elastic member on a continuous upper surface sheet by supplying making the elastic member which is in an expanding condition using a traverse means rock crosswise [of the sheet].

[0003]

[Problem(s) to be Solved by the Invention] By said well-known method of forming an elastic opening in an upper surface sheet, even if it can carry out high-speed supply of the sheet, there is a limit in high-speed operation of a traverse means, and the diaper quantity of production per unit time amount cannot be made not much high. Moreover, by adoption of a traverse means, plant-and-equipment investment increases and, as for the production line of a diaper, the manufacturing cost of a diaper rises.

[0004] The place which this invention makes a technical problem is to solve many problems of said conventional technology, as the body fluid processing supply of throwing away which has elastic opening like said diaper can be manufactured by the simple method.

[0005]

[Means for Solving the Problem] In this invention, said technical problem is solved by the 1st invention concerning a disposable body fluid processing supply, and the 1st manufacture method (henceforth the 2nd invention) and the 2nd manufacture method (henceforth the 3rd invention) concerning said supply.

[0006] Said 1st invention a premise A liquid permeability inner surface sheet and a non-liquid permeability outside surface sheet, The body fluid absorption section is formed of an absorptivity core which intervenes among both [these] sheets. It extends so that a cover sheet portion which makes at least one side of said inside-and-outside side sheet and one may cover an inner surface of this periphery portion from the upper part along with a periphery portion of said absorption section. A opening surrounded by said cover sheet portion is formed in the upper part for a center section of said absorption section, and said cover sheet portion is the

disposable body fluid processing supply which has elastic elasticity along an edge of said opening.

[0007] In this premise, a place by which said 1st invention is characterized is to be formed [for said absorption section to have a cross direction and the cross direction which intersects this direction, and to form in said cross direction the front end section, the back end section, and pars intermedia located among these both ends, and] so that width of face of said absorption section may become the largest in said pars intermedia.

[0008] There are the following embodiments in said 1st invention.

[0009] (1) From said forward back end section, said absorption section is formed so that said width of face may become large gradually toward said pars intermedia.

[0010] (2) In said pars intermedia, said width of face has become the largest by part from said back end section.

[0011] (3) Said forward back end section is covered with said cover sheet portion.

[0012] (4) When a band-like elastic member whose width of face is 5-50mm is attached in a edge of said opening, said cover sheet joins to a crosswise center section under [said] an elastic member in said pars intermedia and said supply is worn, said elastic member and cover sheet are able to form a cross section of an about T character mold.

[0013] The 2nd invention of said the 2nd and 3 invention a premise The body fluid absorption section is formed of a liquid permeability inner surface sheet, a non-liquid permeability outside surface sheet, and an absorptivity core that intervenes among both [these] sheets. It extends so that a cover sheet portion which makes at least one side of said inside-and-outside side sheet and one may cover an inner surface of this periphery portion from the upper part along with a periphery portion of said absorption section. A opening surrounded by said cover sheet portion is formed in the upper part for a center section of said absorption section, and said cover sheet portion is the manufacture method of a disposable body fluid processing supply of having elastic elasticity along an edge of said opening.

[0014] In this premise, a place by which said 2nd invention is characterized is to include the following process in said manufacture method.

[0015] a. A process which covers said core with said inner surface sheet and outside sheet, joins said inside-and-outside side sheet in a portion which extends from a periphery of said core, and obtains a layered product, b. So that the elastic members of the c. aforementioned edges-on-both-sides section may overlap a process which joins an elastic member to the edges-on-both-sides section which is concurrent on both sides of said core of one of said inside-and-outside side sheets in the shape of a straight line in the state of expanding A process which ****s said inner surface sheet inside and turns up said layered product, a process which joins said layered product d. Turned up along with two imaginary lines which intersect said edges-on-both-sides section, and are mutually concurrent on both sides of said core, and a process which shrinks said elastic member after the e. aforementioned

process d.

[0016] In a desirable embodiment of said 2nd invention, said elastic member is the band-like thing which has width of face which is 5-50mm, and joins this member to said edges-on-both-sides section in a crosswise interstitial segment. Moreover, said manufacture method can include a process by which a means for attaching said supply firmly to clothes is formed in said outside sheet.

[0017] Said 3rd invention a premise A liquid permeability inner surface sheet and a non-liquid permeability outside surface sheet, The body fluid absorption section is formed of an absorptivity core which intervenes among both [these] sheets. It extends so that a cover sheet portion which makes at least one side of said inside-and-outside side sheet and one may cover an inner surface of this periphery portion from the upper part along with a periphery portion of said absorption section. A opening surrounded by said cover sheet portion is formed in the upper part for a center section of said absorption section, and said cover sheet portion is the continuous manufacture method of a disposable body fluid processing supply of having elastic elasticity along an edge of said opening.

[0018] In this premise, a place by which said 3rd invention is characterized is to include the following process in said manufacture method.

[0019] a. A process which supplies continuously each of the 2nd web for forming the 1st web and said outside sheet for forming said inner surface sheet to an one direction, b. A process which supplies an elastic member to said one direction continuously, and is joined to the edges-on-both-sides section of one of said the 1st and 2 webs in the shape of a straight line in the state of expanding, c. A process which supplies said core to a crosswise central region of one of said the 1st and 2 webs intermittently to said one direction, d. A process which forms the 3rd web which consists said the 1st and 2 web of superposition, these the 1st and 2 webs, an elastic member, and a core so that said core may be covered in the shape of sandwiches after supplying said elastic member and core, e. Said 1st web is carried out inside so that the elastic members of said edges-on-both-sides section may overlap. f. With a process which turns up said 3rd web A process which joins said 1st web which contact mutually [said 3rd turned-up web] by part between said adjacent cores and cores, g. In between said cores and cores which adjoin each other in said 3rd web joined at said process f A process cut so that a part joined to each of both sides bordering on this imaginary line at said process f may remain selectively along with an imaginary line prolonged crosswise [of said 3rd web], and a process which shrinks said elastic member after the h. aforementioned process g.

[0020] In the desirable embodiment of said 3rd invention, said elastic member is the band-like thing which has width of face which is 5-50mm, and can join this member to said edges-on-both-sides section in a crosswise interstitial segment. Moreover, said manufacture method can include a process by which a means for attaching said supply firmly to clothes is formed in said 2nd web.

[0021]

[Embodiment of the Invention] It is as follows when the details of the manufacture method of the disposable body fluid processing supply concerning this invention are explained with reference to an attached drawing.

[0022] Drawing 1 and 2 are the perspective diagram and its II-II line cross section of the body fluid processing supply 1. The processing supply 1 is for processing at least one side of feces and urine, and is suitable for using together with a diaper cover or the worn trousers.

[0023] The processing supply 1 has the liquid permeability inner surface sheet 2, the non-liquid permeability outside surface sheet 3, and both [these] the sheets 2 and the absorptivity core 4 which intervenes among three. The cover sheet section 7 is formed by the body fluid absorption section 6 being formed, extending from the periphery of a core 4, and overlap and the joined inside-and-outside side sheets 2 and 3 being turned [in the periphery of a core 4] up by the inner surface sheet 2, the outside sheet 3, and the core 4 to the upper part of the absorption section 6. The opening 8 surrounded in the cover sheet section 7 is formed in the central region by the side of the inner surface of the body fluid absorption section 6. The cover sheet section 7 had the elastic member 12 annularly prolonged along the edge of a opening 8, and this elastic member 12 has joined it to one [at least] inner surface of the inside-and-outside side sheets 2 and 3 in the state of expanding. The amount of point has the edged front end section 41 and the edged back end section 42, and these both ends 41 and the pars intermedia 43 located among 42, width of face becomes large gradually toward the pars intermedia 43 from the front end section 41, and from the back end section 42, the processing supply 1 is formed so that width of face may become large toward pars intermedia 43, and width of face is the largest near the back end section 42. A binder 9 is applied to the underside of the outside sheet 3 of the absorption section 6, and coat protection is carried out by the releasing paper 11.

[0024] Drawing 3 is a partial fracture plan when attaching the processing supply 1 in a diaper cover 21. A diaper cover 21 is the laminate of the inner surface sheet 22 made from a plastic film, and the outside sheet 23 made of a nonwoven fabric, and is presenting the sandglass mold. A diaper cover 21 has the circumference region 26 of a forward fuselage assembly, the circumference region 27 of a back drum, and both [these] the regions 26 and the length-from-the-crotch-to-the-cuff region 28 in which it is located among 27 in a cross direction, and the edges on both sides of the length-from-the-crotch-to-the-cuff region 28 are curving toward the inside of a diaper cover 21. In the length-from-the-crotch-to-the-cuff region 28, along with the side edge, the circumference elastic member 29 of a foot extended, and this elastic member 29 has joined to one [at least] inner surface of the inside-and-outside side sheets 22 and 23 in the state of expanding. The processing supply 1 which removed the releasing paper 11 is stuck on the inner surface applied to the length-from-the-crotch-to-the-cuff region 28 dismountable through the binder 9 from the circumference region 27 of a back drum. This processing supply 1 can

change the installation location suitably.

[0025] the time of wearing the conventional disposable diaper by a diaper cover's 21 having the tape fastener 31 in the edges-on-both-sides section of the circumference region 27 of a back drum, and using this fastener 31 — the same — the assembly of the processing supply 1 of drawing 3, and a diaper cover 21 — wearing — the opening 8 of the processing supply 1 — diaper 1 wearer's anus can be mostly located in the center.

[0026] If the processing supply 1 is used in this way, stools will be excreted into a opening 8 and will not soil a diaper cover 21. When throwing away the stools, the activity thrown away since what is necessary is not to have the big diaper cover 21 but to have only the small supply 1 becomes easy. When the front end section 41 currently formed so that width of face may become narrow gradually and the amount of point may sharpen was located in the length-from-the-crotch-to-the-cuff region 28 and a diaper cover 21 is worn, the front end section 41 fits in the crotch section reasonable, and there is no feeling of the different sum by having used the processing supply 1. Moreover, especially the about 42 back end section has wide width of face, and can receive many stools in the inside. The processing supply 1 can also be stuck on a diaper cover 21 so that adhesion of a binder 9 may be made high and cannot be removed. Moreover, the processing supply 1 can be replaced with a diaper cover 21, and can also be used, being able to attach in the inner surface of a disposable diaper or trousers.

[0027] Drawing 4 is a drawing in which the manufacturing process of the processing supply 1 of drawing 1 is shown by (1) – (3). At a process (1), it is joined with hot melt adhesive (not shown), and the portion into which the liquid permeability inner surface sheet 2 of the trapezoid configuration where magnitude was the same and did a handstand, and the outside sheet 3 of non-liquid permeability lay on top of the center section of these sheets 2 and 3 on both sides of the absorptivity core 4, and extend from the periphery of a core 4 forms the trapezoid layered product 40. A layered product 40 has the raised bottom 44 and lower base 45 which are prolonged between edges on both sides 42 and these edges on both sides 42, and the raised bottom 44 is formed for a long time than a lower base 45. Inside the edges on both sides 42 of a layered product 40, an elastic member 12 is joined in the shape of a straight line in the state of expanding through hot melt adhesive (not shown). In the example of a graphic display, an elastic member 12 is located between the inside-and-outside side sheet 2 and 3, and is joined to at least one side of these sheets 2 and 3. A core 4 is joinable to at least one side of the inside-and-outside side sheets 2 and 3. In addition, at the process (2), the binder 9 beforehand applied to the outside sheet 3 is protected with the releasing paper 11.

[0028] At a process (2), a layered product 40 carries out the inner surface sheet 2 inside, and is bent by center line C-C, and the portions in alignment with the portions and lower base 45 in alignment with the raised bottom 44 which overlap by the bending are joined with hot melt adhesive 47 and 48 (refer to process (2)). The

binder 9 applied in the phase before Process b is covered with the outside sheet 3 by the releasing paper 11. In addition, the bent layered product 40 is shown by partial fracture drawing.

[0029] At a process (3), an elastic member 12 is released from an expanding condition, and contracts. With the contraction, the inside-and-outside side sheets 2 and 3 of the portion which has extended from the core 4 carry out the inner surface sheet 2 inside, are bent in the periphery of a core 4, and serve as a bonnet and the cover sheet section 7 which forms a opening 8 in the center-section upper part of a core 4 from the upper part in the portion along the periphery of a core 4. Moreover, it becomes the front end section 41 near the raised bottom 44 of a layered product 40, and becomes the back end section 42 near the lower base 45. In this way, drawing 1 and the processing supply 1 of 2 with which an elastic member 12 draws an arc and is prolonged along the edge of a opening 8 are obtained.

[0030] As for the processing supply 1, the depth of the processing supply 1 with which between the order edge 41 and 42 curves to the outside of a supply 1, and results from a opening 8 to a core 4 becomes deep as the amount of contraction of an elastic member 12 becomes large.

[0031] Drawing 5 is the same drawing as drawing 1 which shows an example of the mode of the processing supply 1. The front end section 41 and the back end section 42 are sharp almost similarly, and, as for pars intermedia 43, this processing supply 1 has almost uniform width of face between the order edge 41 and 42. However, this processing supply 1 has the same cross-section structure as drawing 2.

[0032] Drawing 6 is a plan when attaching the processing supply 1 of drawing 5 in the length-from-the-crotch-to-the-cuff region 28 of a diaper cover 21. The size between the order edge 41 and 42 is long, the opening 8 is also formed greatly, and the processing supply 1 of drawing 6 can receive stools and urine from it of drawing 3.

[0033] Drawing 7, and 8 and 9 are the same as that of drawing 5 which shows an example of the mode of the processing supply 1, however they are with the drawing with which the part is fractured, and the drawing in which the VIII-VIII line and IX-IX line cutting plane of drawing 7 are shown. With this processing supply 1, the band-like elastic member 12 of 5-50mm width of face is annularly prolonged on the edge of a opening 8. A member 12 is what covered elongated thread rubber of two or more articles 12A with nonwoven fabric 12B, and the outside sheet 3 turned up in the inside of a supply 1 has joined it to the crosswise pars intermedia of a member 12. If a supply 1 is worn, the elastic member 12 (refer to drawing 8) which spread so that it might collaborate with the outside sheet 3 in the interstitial segment 43 of the order edges 41 and 42 and an about T character mold might be drawn contacts a wearer's skin in a large area, and the leakage of the feces and urine from a supply 1 can be prevented. an elastic member 12 enables it to draw a configuration like drawing 8 with the outside sheet 3 — being alike — as for the thing nearer to the outside of a member 12, it is more desirable to make it expanding stress become low

among thread rubber of two or more articles 12A prolonged annularly. Moreover, as shown to drawing 9 by near the supply 1 order edges 41 and 42, the thing of the underside portion of an elastic member 12 which the whole has joined to the outside surface of the outside sheet 3 mostly is desirable. Unlike it of drawing 2, from the periphery of a core 4, the outside sheet 3 extends for a long time, and is turned up rather than the inner surface sheet 2 with the supply 1 of drawing 8. The cover sheet section 7 which has covered near the periphery of the body fluid absorption section 6 is formed mainly with the outside sheet 3 of non-liquid permeability.

[0034] Drawing 10 and 11 are the side elevation of the process for manufacturing continuously the processing supply 1 shown in drawing 5, and the plan of the main portions in the side elevation. In process g-k of drawing 10, if it is original so that the absorptivity core 104 can be directly seen, the nonwoven fabric 102 and plastic film 103 which have covered the core 104 are fractured.

[0035] in these drawing 10 and 11, the web of the non-liquid permeability plastic film 103 used as the outside sheet 3 of the body fluid absorption section 6 is supplied to the right continuously (drawing 11 — the bottom from a top) from the left of drawing 10 at Process a.

[0036] At Process b, the hot melt adhesive (not shown) breathed out from the 1st nozzle 131 is applied to the edges-on-both-sides section of a film 103.

[0037] At Process c, the elastic member 112 of elasticity continues in the shape of a straight line in the state of expanding inside the edges on both sides of a film 103, and is supplied to it, and it is joined by the adhesives of Process b.

[0038] At Process d, the hot melt adhesive (not shown) breathed out from the 2nd nozzle 132 is applied in the cross direction and the length direction of a film 103 intermittently or continuously.

[0039] At Process e, the absorptivity core 104 carried by the feeder 134 is intermittently arranged along with the longitudinal direction of a film 103 in the crosswise central region of a film 103, and is joined to a film 103 by the adhesives of Process d.

[0040] At Processes f and g, the web of the liquid permeability nonwoven fabric 102 which should serve as the inner surface sheet 2 of the body fluid absorption section 6 is supplied continuously. It has the almost same width of face as a film 103, the whole film 103 and a core 104 are covered, it is joined to a film 103 by the adhesives of Process d, and a nonwoven fabric 102 forms the web which consists of a nonwoven fabric 102, a film 103, and a core 104.

[0041] At Process h, the adhesives 136 (refer to drawing 11) breathed out from the 3rd nozzle 133 are applied to the upper surface of a nonwoven fabric 102 so that it may extend crosswise [of a nonwoven fabric 102] among adjacent core 104.

Adhesives 136 are applied to the range from one side of edges on both sides to center line C-C (refer to drawing 11) at least among the whole width of face of a nonwoven fabric 102, and it is applied to the whole width of face in the example of drawing 11.

[0042] At Process i, the overlapping nonwoven fabric 102 and film 103 carry out a nonwoven fabric 102 inside, and are turned up along with center line C-C, and nonwoven fabric 102 are joined through adhesives 136.

[0043] At Processes j and k, in the travelling direction of a process, the overlapping nonwoven fabric 102 and film 103 are cut by the cutter 137, and the processing supply 1 with which the individual exception was turned up is obtained so that the field where adhesives 136 were applied may be bisected to forward and backward.

[0044] The turned-up processing supply 1 can extend at Process l. It extends from the periphery of a core 104, and overlap, and the nonwoven fabric 102 and film 103 which have been joined will be bent with the contraction in the periphery of a core 104, and will serve as the cover sheet section 7 as shown in drawing 5, and a supply 1 will form a opening 8, if an elastic member 112 contracts. However, without the ability extending like drawing 5, the processing supply 1 is supplied to a need person, while it had been turned up by it, and it can be opened after that. Process l can be skipped when such.

[0045] Each of the nonwoven fabric 102 used by this manufacturing process, a film 103, a core 104, and an elastic member 112 serves as the inner surface sheet 2 of the processing supply 1, the outside sheet 3, a core 4, and an elastic member 12.

[0046] Drawing 12 is the XII-XII line cross section of the web obtained at the process g of drawing 11. The core 104 and the elastic member 112 are covered with the nonwoven fabric 102 and the film 103 in this drawing.

[0047] Drawing 13 is the same drawing as drawing 12 which shows an example of the web obtained at the process g of drawing 11. The side edge section of a film 103 is turned up and the elastic member 112 is covered in this drawing by that piled-up film 103. What is necessary is to use the film 103 with width of face wider than a nonwoven fabric 102, and just to add the process for turning up the side edge section of a film 103, as shown in drawing to the process of drawing 10, in order to obtain the processing supply 1 of this mode.

[0048] Drawing 14 is the same drawing as the process i of drawing 11 which shows other examples of the embodiment of this invention. In this mode, the spreading region of the parallel adhesives 136 of two articles is mutually formed between the adjacent cores 104, and a web is cut by the subsequent process j between the adhesives 136 of these two articles. There is no possibility of adhesives 136 being exposed to the end face which it was cut and was produced with the processing supply 1 obtained, and stimulating a wearer's skin strongly.

[0049] In this invention, if the member of the processing supply 1 is the thing of heat joining nature, it is also possible to join members by joining, without using adhesives. The processing supply 1 does not necessarily need the binder 9 shown in drawing 2. However, if needed, the spreading process of a binder 9 can be established between process b-h of drawing 10. Moreover, it can replace with a binder 9, the hook member or loop member of the mechanical fastener known for a trade name piece of Velcro etc. can be joined to the outside sheet 3, and it can be made the means for

attaching the processing supply 1 firmly to the clothes of diaper cover 21 grade.

[0050]

[Effect of the Invention] According to the disposable body fluid processing supply concerning this invention, only feces can be held in this supply and a big diaper is not soiled by feces. The front end section of a supply is formed so that the amount of point may sharpen, and width of face may become narrow gradually, and it fits in a supply wearer's crotch reasonable.

[0051] When attaching an elastic member along the edge of a opening, it is not necessary to make an elastic member rock like the conventional technology using a traverse means, and according to the manufacture method of the body fluid processing supply concerning this invention, since an elastic member can be supplied linearly, it does not have a possibility of reducing the production rate of a processing supply with the speed of supply of an elastic member. Moreover, since supply equipment will become comparatively easy when supplying an elastic member in this way, it becomes possible to suppress cost lifting of the processing supply by the plant-and-equipment investment.

[Translation done.]

*** NOTICES ***

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2.**** shows the word which can not be translated.

3.In the drawings, any words are not translated.

DESCRIPTION OF DRAWINGS

[Brief Description of the Drawings]

[Drawing 1] The perspective diagram of a processing supply.

[Drawing 2] The II-II line cross section of drawing 1 .

[Drawing 3] The plan when attaching a processing supply in bundle covering.

[Drawing 4] The drawing in which an example of a processing supply manufacturing process is shown.

[Drawing 5] The perspective diagram of the processing supply of a different configuration from drawing 1 .

[Drawing 6] The plan when attaching the processing supply of drawing 5 in bundle covering.

[Drawing 7] The partial fracture perspective diagram of the processing supply of a different configuration from drawing 5 .

[Drawing 8] The VIII-VIII line cross section of drawing 7 .

[Drawing 9] The IX-IX line important section cross section of drawing 7 .

[Drawing 10] The side elevation of the manufacturing process of the processing supply of drawing 5 .

[Drawing 11] The plan for the body of the process of drawing 10 .

[Drawing 12] The XII-XII line cross section of drawing 11 .

[Drawing 13] The same drawing as drawing 12 which shows an example of the configuration of a web.

[Drawing 14] The part drawing of a manufacturing process showing an example of an embodiment.

[Description of Notations]

1 Processing Supply

2 Inner Surface Sheet

3 Outside Sheet

4 Core

6 Body Fluid Absorption Section

7 Cover Sheet

8 Opening

12 Elastic Member

102 1st Web (Liquid Permeability Inner Surface Sheet)

103 2nd Web (Non-Liquid Permeability Outside Surface Sheet)

104 Core

112 Elastic Member

136 About (Adhesives) Joint

[Translation done.]

*** NOTICES ***

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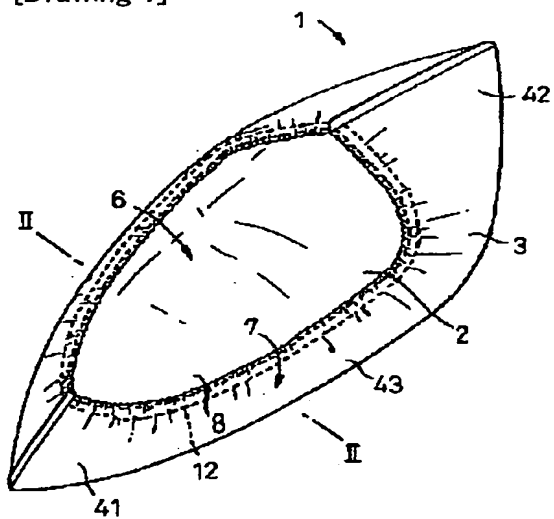
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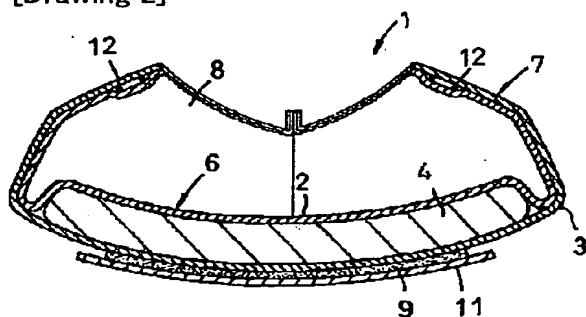
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DRAWINGS

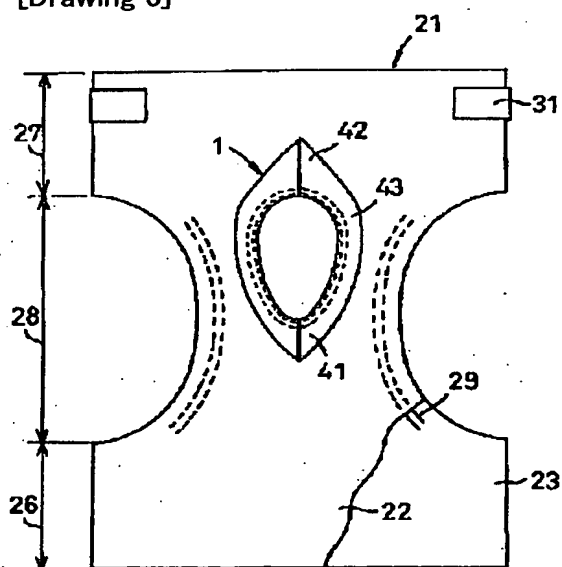
[Drawing 1]



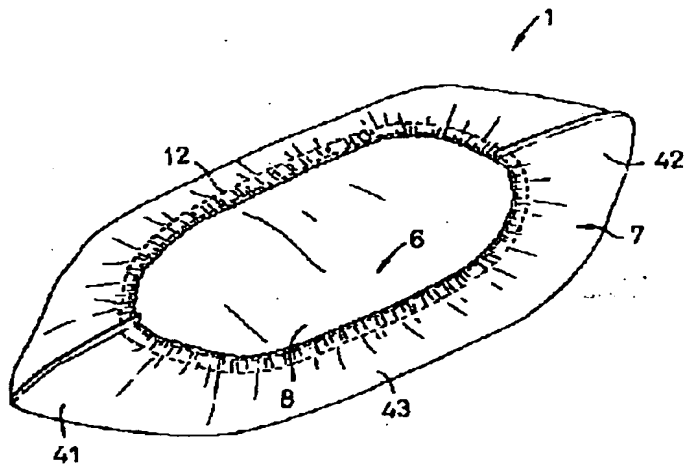
[Drawing 2]



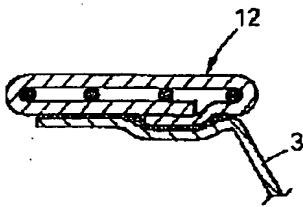
[Drawing 3]



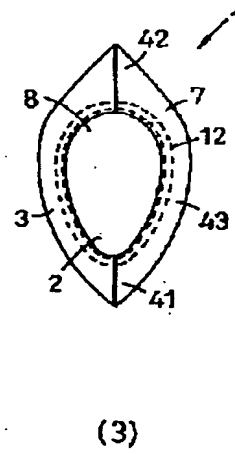
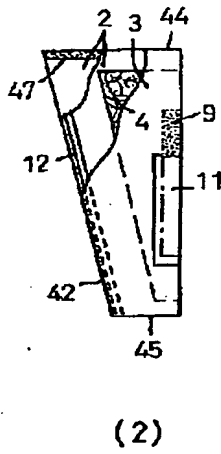
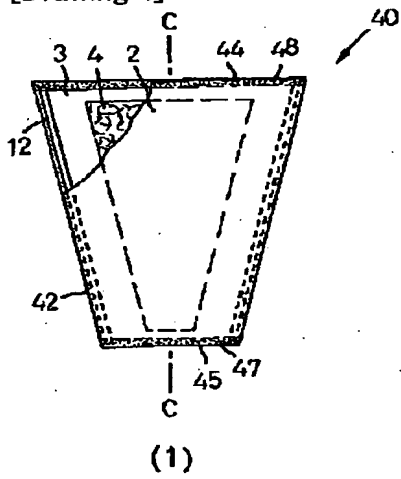
[Drawing 5]



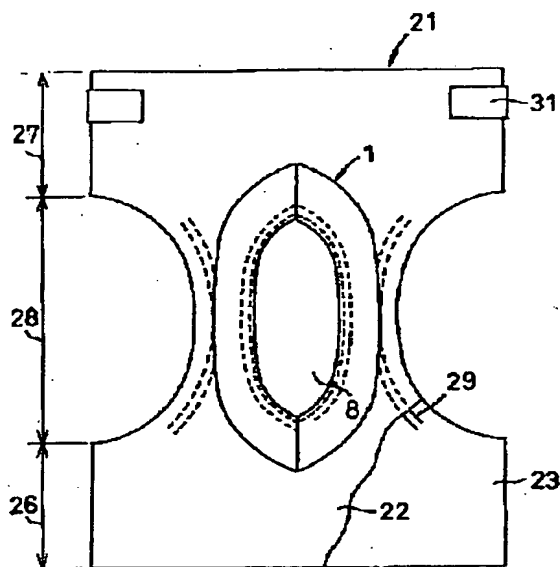
[Drawing 9]



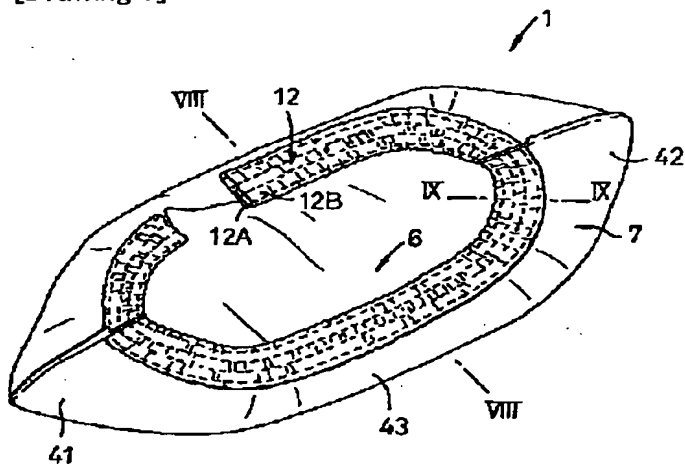
[Drawing 4]



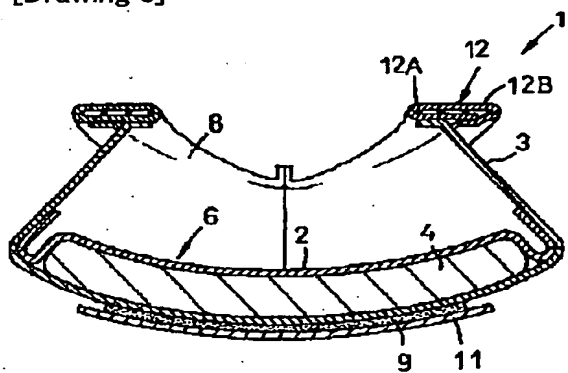
[Drawing 6]



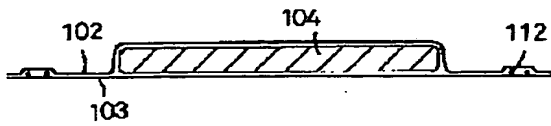
[Drawing 7]



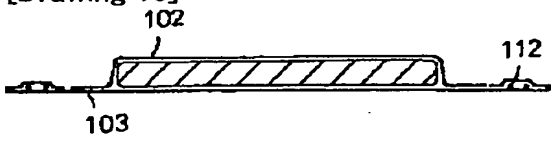
[Drawing 8]



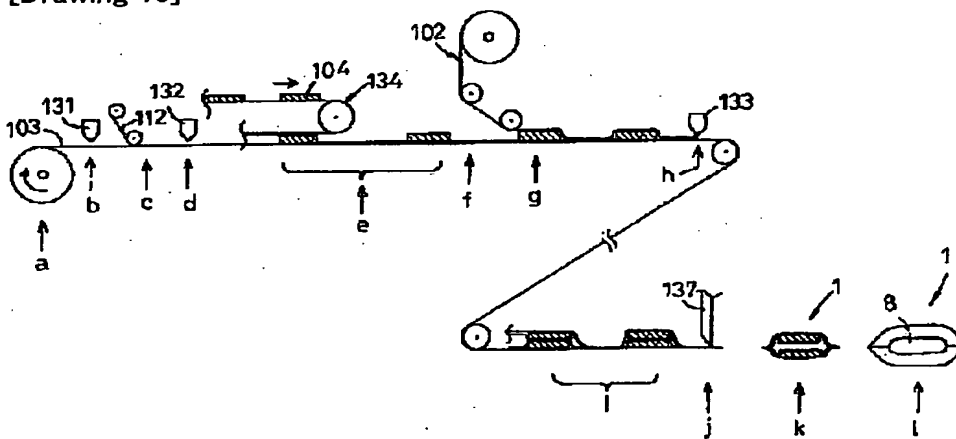
[Drawing 12]



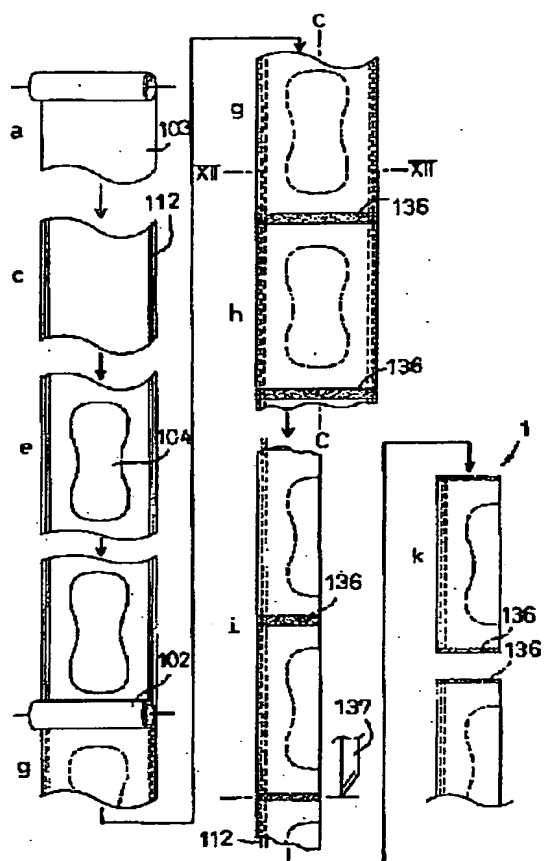
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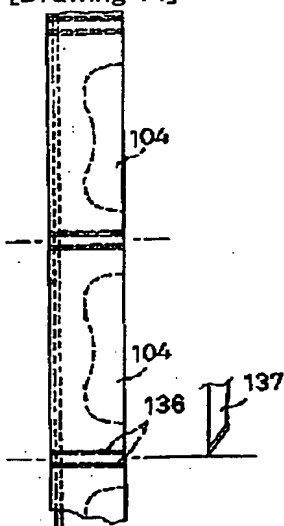
[Drawing 10]



[Drawing 11]



[Drawing 14]



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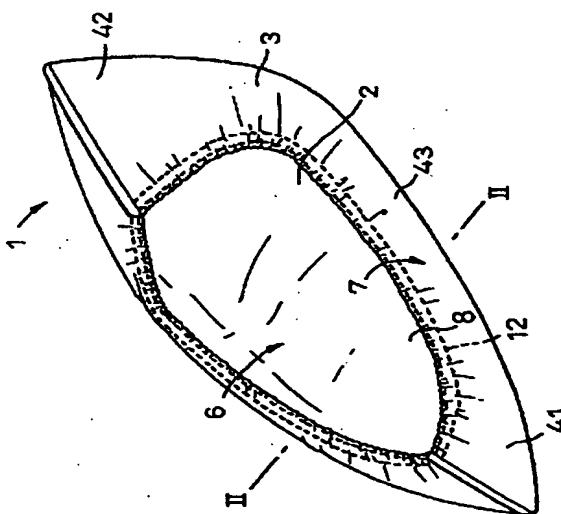
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(54) 【発明の名称】 使い捨て体液処理用品およびその製造方法

(57) 【要約】

【課題】 排泄された便を收容するのに好適な開口を有する使い捨て体液処理用品の提供。

【解決手段】 体液吸収部6の上方にカバーシート部分7によって圍繞された開口8を有する体液処理用品1が、長手方向に前端部41と後端部42とこれら両端部41、42間に位置する中間部43とを有し、中間部43で幅が最も広くなるように形成される。



【特許請求の範囲】

【請求項1】 透液性内面シートと、不透液性外面シートと、これら両シート間に介在する吸収性コアとによって体液吸収部が形成され、前記内外面シートの少なくとも一方と一体をなすカバーシート部分が前記吸収部の周縁部分に沿って該周縁部分の内面を上方から覆うように延在して、前記吸収部の中央部分の上方に、前記カバーシート部分によって圍繞された開口が形成され、前記カバーシート部分が前記開口の縁に沿って弾力的な伸縮性を有する使い捨て体液処理用品において、前記吸収部が前後方向と、この方向と交差する幅方向とを有し、前記前後方向に前部と後部とこれら両端部間に位置する中間部とが形成され、前記吸収部の幅が前記中間部で最も広くなるように形成されていることを特徴とする前記用品。

【請求項2】 前記吸収部は、前記前後端部から前記中間部へ向かって前記幅が次第に広くなるように形成されている請求項1記載の用品。

【請求項3】 前記中間部は前記後端部よりの部位で前記幅が最も広がっている請求項1または2記載の用品。

【請求項4】 前記前後端部が前記カバーシート部分によって覆われている請求項1記載の用品。

【請求項5】 前記開口の縁部には幅が5～50mmの帯状弾性部材が取り付けられ、前記中間部では前記カバーシートが前記弾性部材下面の幅方向中央部に接合し、前記用品が着用されたときに前記弾性部材とカバーシートとがほぼT字型の断面を形成することが可能である請求項1～4のいずれかに記載の用品。

【請求項6】 透液性内面シートと、不透液性外面シートと、これら両シート間に介在する吸収性コアとによって体液吸収部が形成され、前記内外面シートの少なくとも一方と一体をなすカバーシート部分が前記吸収部の周縁部分に沿って該周縁部分の内面を上方から覆うように延在して、前記吸収部の中央部分の上方に、前記カバーシート部分によって圍繞された開口が形成され、前記カバーシート部分が前記開口の縁に沿って弾力的な伸縮性を有する使い捨て体液処理用品の製造方法において、

a. 前記内面シートと外面シートとで前記コアを被覆し、前記内外面シートを前記コアの周縁から延出する部分で接合して積層体を得る工程と、

b. 前記内外面シートいずれかの前記コアを挟んで並行する両側縁部に弾性部材を伸長状態で直線状に接合する工程と、

c. 前記両側縁部の弾性部材どうしが重なり合うように、前記内面シートを内側にして前記積層体を折り重ねる工程と、

d. 折り重ねた前記積層体を、前記両側縁部と交差し、前記コアを挟んで互いに並行する2本の仮想線に沿って接合する工程と、

e. 前記工程dの後に、前記弾性部材を収縮させる工程とを含むことを特徴とする前記製造方法。

【請求項7】 前記弾性部材が5～50mmの幅を有する帯状のものであって、該部材を幅方向の中間部分において前記両側縁部に接合する請求項6記載の製造方法。

【請求項8】 前記用品を着衣に止着するための手段が前記外面シートに形成される工程を含む請求項6または7記載の製造方法。

【請求項9】 透液性内面シートと、不透液性外面シートと、これら両シート間に介在する吸収性コアとによって体液吸収部が形成され、前記内外面シートの少なくとも一方と一体をなすカバーシート部分が前記吸収部の周縁部分に沿って該周縁部分の内面を上方から覆うように延在して、前記吸収部の中央部分の上方に、前記カバーシート部分によって圍繞された開口が形成され、前記カバーシート部分が前記開口の縁に沿って弾力的な伸縮性を有する使い捨て体液処理用品の連続的な製造方法において、

a. 前記内面シートを形成するための第1ウェブおよび前記外面シートを形成するための第2ウェブのそれぞれを、一方向へ連続的に供給する工程と、

b. 弾性部材を前記一方向へ連続的に供給し、前記第1、2ウェブいずれかの両側縁部に伸長状態で直線状に接合する工程と、

c. 前記第1、2ウェブいずれかの幅方向中央域に前記コアを前記一方向において間欠的に供給する工程と、

d. 前記弾性部材とコアとを供給した後に、前記コアをサンドウィッチ状に被覆するように前記第1、2ウェブを重ね合わせ、これら第1、2ウェブと弾性部材とコアとからなる第3ウェブを形成する工程と、

e. 前記両側縁部の弾性部材どうしが重なり合うように、前記第1ウェブを内側にして、前記第3ウェブを折り重ねる工程と、

f. 折り重ねた前記第3ウェブの互いに当接する前記第1ウェブどうしを、隣り合う前記コアとコアとの間の部位で接合する工程と、

g. 前記工程fで接合した前記第3ウェブを、隣り合う前記コアとコアとの間において、前記第3ウェブの幅方向へ延びる仮想線に沿って、該仮想線を境界とする両側それぞれに前記工程fで接合した部位が部分的に残るように切断する工程と、

h. 前記工程gの後に、前記弾性部材を収縮させる工程とを含むことを特徴とする前記製造方法。

【請求項10】 前記弾性部材が5～50mmの幅を有する帯状のものであって、該部材を幅方向の中間部分において前記両側縁部に接合する請求項9記載の製造方法。

【請求項11】 前記用品を着衣に止着するための手段が前記第2ウェブに形成される工程を含む請求項9または10記載の製造方法。

【発明の詳細な説明】

【0001】

【発明の属する技術分野】この発明は、使い捨ておむつや使い捨て失禁パンツ等と組み合わせて使用するのに好適な使い捨て体液処理用品の製造方法に関する。

【0002】

【従来の技術】特開平5-293138号公報には、使い捨ておむつの肌当て上面シートに弾性開口部を形成する方法が開示されている。この上面シートでは、開口の縁に沿って弾性部材が伸長状態で弧を描いている。上面シートとして使用するためのシートを連続的に流す一方、トラバース手段を使用して伸長状態にある弾性部材をそのシートの幅方向へ揺動させながら供給することによって、連続する上面シートの上で弾性部材に弧を描かせることができる。

【0003】

【発明が解決しようとする課題】上面シートに弾性開口部を形成する前記公知の方法では、シートを高速供給することができても、トラバース手段の高速運転には限度があり、単位時間当たりのおむつ生産量をあまり高くすることができない。また、おむつの生産ラインは、トラバース手段の採用によって設備投資が嵩み、おむつの製造コストが上昇する。

【0004】この発明が課題とするところは、前記おむつのような弾性開口部を有する使い捨ての体液処理用品を簡易な方法で製造できるようにして、前記従来技術の諸問題を解消することにある。

【0005】

【課題を解決するための手段】この発明において、前記課題は、使い捨て体液処理用品に係る第1発明、および前記用品に係る第1の製造方法（以下では第2発明という）と第2の製造方法（以下では第3発明という）とによって解決される。

【0006】前記第1発明が前提とするのは、透液性内面シートと、不透液性外面シートと、これら両シート間に介在する吸収性コアとによって体液吸収部が形成され、前記内外面シートの少なくとも一方と一体をなすカバーシート部分が前記吸収部の周縁部分に沿って該周縁部分の内面を上方から覆うように延在して、前記吸収部の中央部分の上方に、前記カバーシート部分によって圍繞された開口が形成され、前記カバーシート部分が前記開口の縁に沿って弾性的な伸縮性を有する使い捨て体液処理用品である。

【0007】かかる前提において、前記第1発明が特徴とするところは、前記吸収部が前後方向と、この方向と交差する幅方向とを有し、前記前後方向に前端部と後端部とこれら両端部間に位置する中間部とが形成され、前記吸収部の幅が前記中間部で最も広くなるように形成されていること、にある。

【0008】前記第1発明には、次のような実施態様が

ある。

【0009】（1）前記吸収部は、前記前後端部から前記中間部へ向かって前記幅が次第に広くなるように形成されている。

【0010】（2）前記中間部は前記後端部よりの部位で前記幅が最も広がっている。

【0011】（3）前記前後端部が前記カバーシート部分によって覆われている。

【0012】（4）前記開口の縁部には幅が5～50mmの帯状弾性部材が取り付けられ、前記中間部では前記カバーシートが前記弾性部材下面の幅方向中央部に接合し、前記用品が着用されたときに前記弾性部材とカバーシートとがほぼT字型の断面を形成することが可能である。

【0013】前記第2、3発明のうちの第2発明が前提とするのは、透液性内面シートと、不透液性外面シートと、これら両シート間に介在する吸収性コアとによって体液吸収部が形成され、前記内外面シートの少なくとも一方と一体をなすカバーシート部分が前記吸収部の周縁部分に沿って該周縁部分の内面を上方から覆うように延在して、前記吸収部の中央部分の上方に、前記カバーシート部分によって圍繞された開口が形成され、前記カバーシート部分が前記開口の縁に沿って弾性的な伸縮性を有する使い捨て体液処理用品の製造方法である。

【0014】かかる前提において、前記第2発明が特徴とするところは、前記製造方法に下記工程が含まれることにある。

【0015】a. 前記内面シートと外面シートとで前記コアを被覆し、前記内外面シートを前記コアの周縁から延出する部分で接合して積層体を得る工程と、

b. 前記内外面シートいずれかの前記コアを挟んで並行する両側縁部に弾性部材を伸長状態で直線状に接合する工程と、

c. 前記両側縁部の弾性部材どうしが重なり合うように、前記内面シートを内側に前記積層体を折り重ねる工程と、

d. 折り重ねた前記積層体を、前記両側縁部と交差し、前記コアを挟んで互いに並行する2本の仮想線に沿って接合する工程と、

e. 前記工程dの後に前記弾性部材を収縮させる工程。

【0016】前記第2発明の好ましい実施態様において、前記弾性部材が5～50mmの幅を有する帯状のものであって、該部材を幅方向の中間部分において前記両側縁部に接合する。また、前記製造方法は、前記用品を着衣に止着するための手段が前記外面シートに形成される工程を含むことができる。

【0017】前記第3発明が前提とするのは、透液性内面シートと、不透液性外面シートと、これら両シート間に介在する吸収性コアとによって体液吸収部が形成され、前記内外面シートの少なくとも一方と一体をなすカ

パーシート部分が前記吸収部の周縁部分に沿って該周縁部分の内面を上方から覆うように延在して、前記吸収部の中央部分の上方に、前記カバーシート部分によって圍繞された開口が形成され、前記カバーシート部分が前記開口の縁に沿って弾性的な伸縮性を有する使い捨て体液処理用品の連続的な製造方法である。

【0018】かかる前提において、前記第3発明が特徴とするところは、前記製造方法に下記工程が含まれることにある。

- 【0019】a. 前記内面シートを形成するための第1ウェブおよび前記外面シートを形成するための第2ウェブのそれぞれを、一方向へ連続的に供給する工程と、
- b. 弾性部材を前記一方向へ連続的に供給し、前記第1、2ウェブいずれかの両側縁部に伸長状態で直線状に接合する工程と、
- c. 前記第1、2ウェブいずれかの幅方向中央域に前記コアを前記一方向へ間欠的に供給する工程と、
- d. 前記弾性部材とコアとを供給した後に、前記コアをサンドウィッチ状に被覆するように前記第1、2ウェブを重ね合わせ、これら第1、2ウェブと弾性部材とコアとからなる第3ウェブを形成する工程と、
- e. 前記両側縁部の弾性部材どうしが重なり合うように、前記第1ウェブを内側にして、前記第3ウェブを折り重ねる工程と、
- f. 折り重ねた前記第3ウェブの互いに当接する前記第1ウェブどうしを、隣り合う前記コアとコアとの間の部位で接合する工程と、
- g. 前記工程fで接合した前記第3ウェブを、隣り合う前記コアとコアとの間において、前記第3ウェブの幅方向へ延びる仮想線に沿って、該仮想線を境界とする両側それぞれに前記工程fで接合した部位が部分的に残るように切断する工程と、
- h. 前記工程gの後に、前記弾性部材を収縮させる工程。

【0020】前記第3発明の好ましい実施態様では、前記弾性部材が5～50mmの幅を有する帯状のものであって、該部材を幅方向の中間部分において前記両側縁部に接合することができる。また、前記製造方法は、前記用品を着衣に止着するための手段が前記第2ウェブに形成される工程を含むことができる。

【0021】

【発明の実施の形態】添付の図面を参照して、この発明に係る使い捨て体液処理用品の製造方法の詳細を説明すると、以下のとおりである。

【0022】図1、2は、体液処理用品1の斜視図と、そのII-II線断面図である。処理用品1は糞尿の少なくとも一方を処理するためのもので、おむつカバーや着用したパンツと併用するのに適している。

【0023】処理用品1は、透液性内面シート2と、不透液性外面シート3と、これら両シート2、3間に介在

する吸収性コア4とを有し、内面シート2と外面シート3とコア4とによって体液吸収部6が形成され、コア4の周縁から延出して重なり合い、互いに接合している内外面シート2、3がコア4の周縁で吸収部6の上方へ折り返されることでカバーシート部7が形成されている。体液吸収部6の内面側の中央域には、カバーシート部7で圍繞された開口8が形成されている。カバーシート部7は開口8の縁に沿って環状に延びる弾性部材12を有し、かかる弾性部材12が内外面シート2、3の少なくとも一方の内面に伸長状態で接合している。処理用品1は、先端部分がとがった前端部41と後端部42と、これら両端部41、42間に位置する中間部43とを有し、前端部41から中間部43へ向かって次第に幅が広くなり、また後端部42から中間部43へ向かって幅が広くなるように形成されていて、後端部42の近傍で幅が最も広がっている。吸収部6の外面シート3の下面には粘着剤9が塗布され、剥離紙11によって被覆保護されている。

【0024】図3は、処理用品1をおむつカバー21に取り付けたときの部分破断平面図である。おむつカバー21は、プラスチックフィルム製の内面シート22と不織布製の外面シート23との積層品であって、砂時計型を呈している。おむつカバー21は、前後方向に前胴周り域26と、後胴周り域27と、これら両域26、27間に位置する股下域28とを有し、股下域28の両側縁がおむつカバー21の内側へ向かって湾曲している。股下域28では、側縁に沿って脚周り弾性部材29が延在し、かかる弾性部材29が内外面シート22、23の少なくとも一方の内面に伸長状態で接合している。後胴周り域27から股下域28にかけての内面には、剥離紙11を剥がした処理用品1が粘着剤9を介して取り外し可能に貼り付けられている。かかる処理用品1は、その取り付け位置を適宜変更することができる。

【0025】おむつカバー21は後胴周り域27の両側縁部にテープファスナ31を有し、このファスナ31を使用することによって、従来の使い捨ておむつを着用するときと同様に、図3の処理用品1とおむつカバー21との組立体を着用し、処理用品1の開口8のほぼ中央におむつ1着用者の肛門を位置させることができる。

【0026】処理用品1がこのような使用されると、糞が開口8の中へ排泄され、おむつカバー21を汚すことがない。その糞を捨てるときには、大きなおむつカバー21を持たず、小さな用品1だけを持てばよいから捨てる作業が楽になる。幅が次第に狭くなって先端部分がとがるように形成されている前端部41を股下域28に位置させると、おむつカバー21を着用したときに、前端部41が股間部に無理なくおさまって、処理用品1を使用したことによる異和感がない。また、後端部42近傍は特に幅が広く、その内側には多くの糞を受け容れることができる。処理用品1は、粘着剤9の粘着力を高くし

て、取り外すことができないようにおむつカバー21に貼り付けることもできる。また、処理用品1は、おむつカバー21に代えて、使い捨ておむつやパンツの内面に貼り付けて使用することもできる。

【0027】図4は、図1の処理用品1の製造工程を(1)～(3)によって示す図面である。工程(1)では、大きさが同じで倒立した台形状の透液性内面シート2と不透液性の外面シート3とが、これらシート2、3の中央部に吸収性コア4を挟んで重ね合わせられ、コア4の周縁から延出する部分がホットメルト接着剤(図示せず)で接合されて台形の積層体40を形成する。積層体40は、両側縁42と、これら両側縁42の間に延びる上底44と下底45とを有し、上底44は下底45よりも長く形成されている。積層体40の両側縁42の内側には、弾性部材12がホットメルト接着剤(図示せず)を介して伸長状態で直線状に接合される。図示例では、弾性部材12が、内外面シート2、3間に位置し、これらシート2、3の少なくとも一方に接合されている。コア4は、内外面シート2、3の少なくとも一方に接合することができる。なお、工程(2)では、外面シート3に予め塗布された粘着剤9が剥離紙11で保護されている。

【0028】工程(2)では、積層体40が、内面シート2を内側にして中心線C-Cで折曲され、その折曲によって重なり合う上底44に沿う部分どうしおよび下底45に沿う部分どうしがホットメルト接着剤47および48(工程(2)参照)によって接合される。外面シート3では、工程b以前の段階で塗布された粘着剤9が剥離紙11で被覆されている。なお、折曲された積層体40は、部分破断図で示されている。

【0029】工程(3)では、弾性部材12が伸長状態から解放されて収縮する。その収縮に伴って、コア4から延出している部分の内外面シート2、3は、内面シート2を内側にしてコア4の周縁で折曲され、コア4の周縁に沿う部分を上方から覆い、かつ、コア4の中央部上方に開口8を形成するカバーシート部7となる。また、積層体40の上底44の近傍が前端部41となり、下底45の近傍が後端部42となる。かくして、開口8の縁に沿って弾性部材12が弧を描いて延びる図1、2の処理用品1が得られる。

【0030】処理用品1は、弾性部材12の収縮量が大きくなるにつれて前後端部41、42間が用品1の外側へ湾曲し、開口8からコア4へ至る処理用品1の深さが深くなる。

【0031】図5は、処理用品1の態様の一例を示す図1と同様の図面である。この処理用品1は、前端部41と後端部42とがほぼ同じようにとがっており、中間部43は、前後端部41、42間においてほぼ一様な幅を有する。ただし、この処理用品1は、図2と同様な断面構造を有している。

【0032】図6は、図5の処理用品1をおむつカバー21の股下域28に取り付けたときの平面図である。図6の処理用品1は、図3のそれよりも前後端部41、42間の寸法が長く、開口8も大きく形成されており、糞と尿とを受け容れることができる。

【0033】図7、8、9は、処理用品1の態様の一例を示す図5と同様の、ただし、一部が破断されている図面と、図7のV I I I - V I I I線およびI X - I X線切断面を示す図面とである。この処理用品1では、開口8の縁に5～50mm幅の帯状の弾性部材12が環状に延びている。部材12は、伸長した複数条の糸ゴム12Aを不織布12Bで被覆したもので、部材12の幅方向中間部には、用品1の内側へ折り返された外面シート3が接合している。用品1が着用されると、前後端部41、42の中間部分43で外面シート3と協働してほぼT字型を画くように広がった弾性部材12(図8参照)が、広い面積で着用者の肌に当接し、用品1からの糞尿の漏れを防止できる。弾性部材12が外面シート3とともに図8のような形状を画くことができるようにするには、環状に延びる複数条の糸ゴム12Aのうちで、部材12の外側に近いものほど伸長応力が低くなるようにすることが好ましい。また、用品1の前後端部41、42の近傍では、図9に示されるように弾性部材12の下面部分のほぼ全体が外面シート3の外面に接合していることが好ましい。図8の用品1では、図2のそれと異なり、外面シート3が内面シート2よりもコア4の周縁から長く延出して折り返されている。体液吸収部6の周縁近傍を被覆しているカバーシート部7は、主として不透液性の外面シート3で形成されている。

【0034】図10、11は、図5に示された処理用品1を連続的に製造するための工程の側面図と、その側面図における主要な部分の平面図である。図10の工程g～kでは、吸収性コア104が直接見えるように、本来であればコア104を被覆している不織布102とプラスチックフィルム103とが破断されている。

【0035】これらの図10、11において、工程aでは、体液吸収部6の外面シート3となる不透液性プラスチックフィルム103のウェブが、図10の左から右へと(図11では上から下へと)連続的に供給される。

【0036】工程bでは、フィルム103の両側縁部に第1ノズル131から吐出されるホットメルト接着剤(図示せず)が塗布される。

【0037】工程cでは、フィルム103の両側縁の内側に伸縮性の弾性部材112が伸長状態で直線状に連続して供給され、工程bの接着剤によって接合される。

【0038】工程dでは、第2ノズル132から吐出されるホットメルト接着剤(図示せず)が、フィルム103の幅方向と長さ方向とに、間欠的または連続的に塗布される。

【0039】工程eでは、供給装置134によって運ば

れた吸収性コア104が、フィルム103の幅方向中央域にフィルム103の長手方向に沿って間欠的に配置され、工程dの接着剤によってフィルム103に接合される。

【0040】工程f、gでは、体液吸収部6の内面シート2となるべき透液性不織布102のウェブが連続的に供給される。不織布102は、フィルム103とほぼ同じ幅を有し、フィルム103の全体とコア104とを被覆して、工程dの接着剤によってフィルム103に対して接合されて、不織布102とフィルム103とコア104とからなるウェブを形成する。

【0041】工程hでは、第3ノズル133から吐出される接着剤136（図11参照）が、隣り合うコア104どうしの間で不織布102の幅方向へ延びるように不織布102の上面に塗布される。接着剤136は、不織布102の幅全体のうちで少なくとも両側縁の一方から中心線C-C（図11参照）までの範囲に塗布されるもので、図11の例では、それが幅全体に塗布されている。

【0042】工程iでは、重なり合う不織布102とフィルム103とが、不織布102を内側にして、中心線C-Cに沿って折り重ねられ、不織布102どうしが接着剤136を介して接合される。

【0043】工程j、kでは、工程の進行方向において、接着剤136が塗布された領域を前後へ二分するように、カッター137によって、重なり合う不織布102とフィルム103とが切断され、個別の折り重ねられた処理用品1が得られる。

【0044】工程lでは、折り重ねられた処理用品1が広げられる。用品1は、弾性部材112が収縮すると、コア104の周縁から延出して重なり合い、互いに接合している不織布102とフィルム103とが、その収縮に伴ってコア104の周縁で折曲され、図5に示されているようなカバーシート部7となり、開口8を形成する。ただし、処理用品1は、図5のように広げられることなく、折り重ねられたままに需要者に供給され、その後広げられることもある。このようなときには、工程1を省略することができる。

【0045】この、製造工程で使用された不織布102、フィルム103、コア104、弾性部材112のそれぞれは、処理用品1の内面シート2、外面シート3、コア4、弾性部材12となる。

【0046】図12は、図11の工程gで得られるウェブのXII-XII線断面図である。この図では、コア104と弾性部材112とが、不織布102とフィルム103とで被覆されている。

【0047】図13は、図11の工程gで得られるウェブの一例を示す図12と同様の図面である。この図では、フィルム103の側縁部が折り重ねられ、弾性部材112がその重ねられたフィルム103で被覆されてい

る。かかる態様の処理用品1を得るには、不織布102よりも幅の広いフィルム103を使用し、フィルム103の側縁部を図のように折り重ねるための工程を図10の工程に加えればよい。

【0048】図14は、この発明の実施態様の他の一例を示す図11の工程iと同様の図面である。この態様では、隣り合うコア104の間に、互いに平行な2条の接着剤136の塗布域が形成されており、その後の工程jで、ウェブがこれら2条の接着剤136の間において切断される。得られる処理用品1では、切断されて生じた端面に接着剤136が露出して着用者の肌を強く刺激するという恐れがない。

【0049】この発明において、処理用品1の部材が熱溶着性のものであれば、接着剤を使用せずに部材どうしを溶着によって接合することも可能である。処理用品1は、図2に示された粘着剤9を必ずしも必要としない。しかし、必要とするならば、図10の工程b～hの間に粘着剤9の塗布工程を設けることができる。また、粘着剤9に代えて、商品名マジックテープ等で知られるメカニカルファスナのフック部材またはループ部材を外面シート3に接合して、処理用品1をおむつカバー21等の着衣に止着するための手段にすることができる。

【0050】

【発明の効果】この発明に係る使い捨て体液処理用品によれば、糞便だけをこの用品内に収容することができ、大きなおむつを糞便で汚すことがない。用品の前端部は先端部分がとがるように幅が次第に狭くなるように形成されていて、用品着用者の股部に無理なくおさまる。

【0051】この発明に係る体液処理用品の製造方法によれば、開口の縁に沿って弾性部材を取り付けるときに、従来技術のようにトラバース手段を使用して弾性部材を揺動させる必要がなく、弾性部材は直線的に供給できるから、弾性部材の供給速度によって処理用品の生産速度を低下させる恐れがない。また、弾性部材をこのように供給するときには、供給設備が比較的簡単なものになるから、その設備投資による処理用品のコスト上昇を抑えることが可能になる。

【図面の簡単な説明】

【図1】処理用品の斜視図。

【図2】図1のI-I線断面図。

【図3】処理用品をおしめカバーに取り付けたときの平面図。

【図4】処理用品製造工程の一例を示す図面。

【図5】図1と異なる形状の処理用品の斜視図。

【図6】図5の処理用品をおしめカバーに取り付けたときの平面図。

【図7】図5と異なる形状の処理用品の部分破断斜視図。

【図8】図7のV-V線断面図。

【図9】図7のIX-IX線要部断面図。

【図10】図5の処理用品の製造工程の側面図。

【図11】図10の工程の主要部分の平面図。

【図12】図11のXII-XII線断面図。

【図13】ウェブの形状の一例を示す図12と同様の図面。

【図14】実施態様の一例を示す製造工程の部分図。

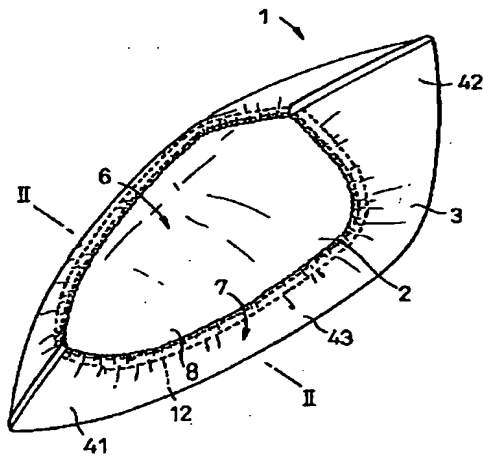
【符号の説明】

- 1 処理用品
- 2 内面シート
- 3 外面シート

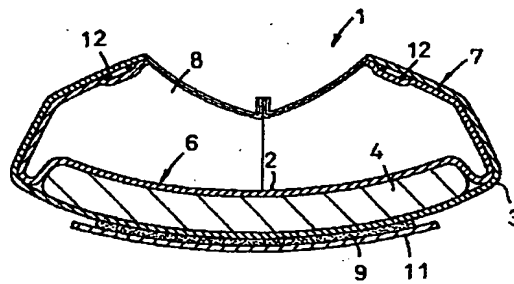
- * 4 コア
- 6 体液吸収部
- 7 カバーシート
- 8 開口
- 12 弾性部材
- 102 第1ウェブ（透液性内面シート）
- 103 第2ウェブ（不透液性外面シート）
- 104 コア
- 112 弾性部材
- 10 136 接合部位（接着剤）

*

【図1】

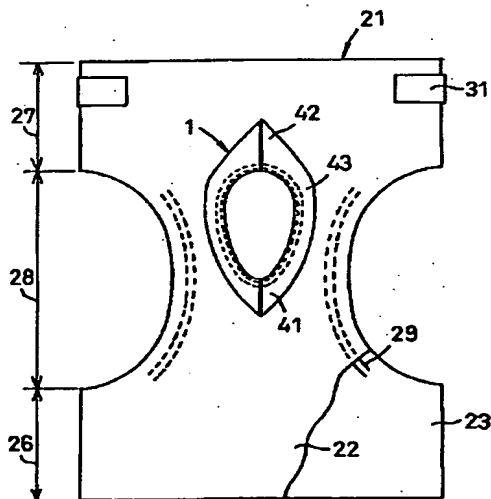


【図2】

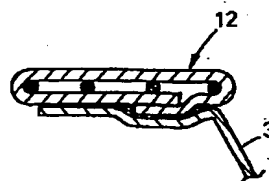


【図5】

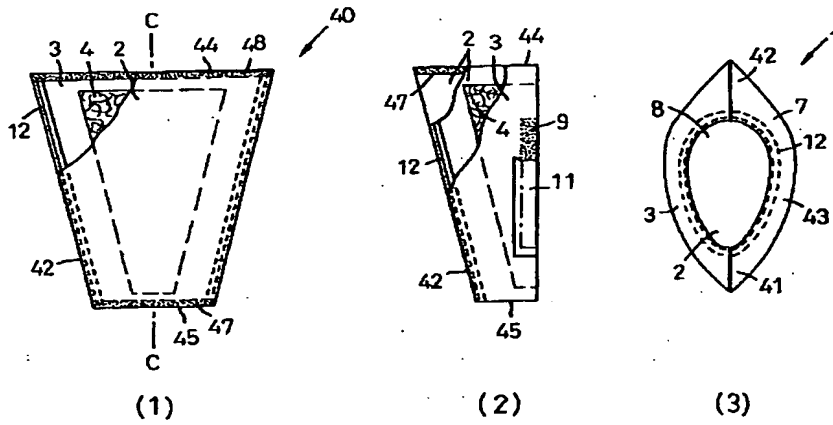
【図3】



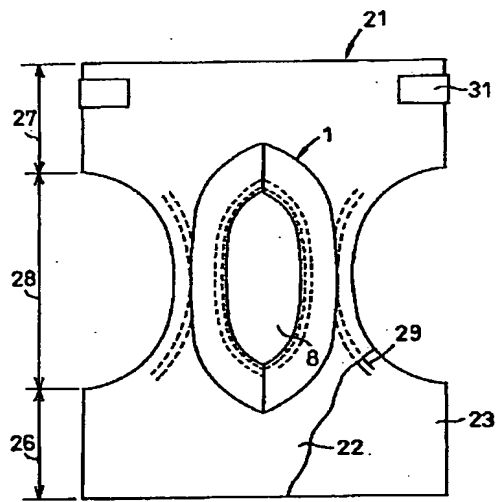
【図9】



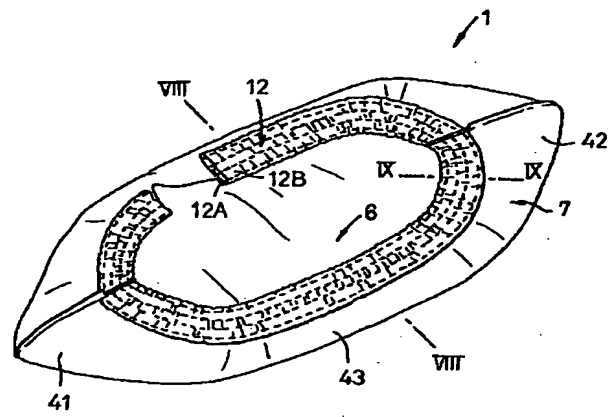
【図4】



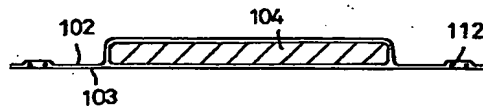
【図6】



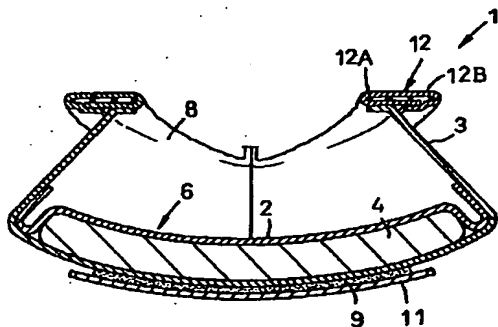
【図7】



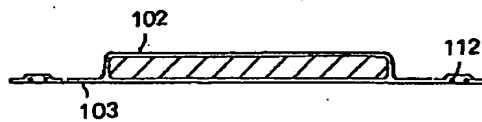
【図12】



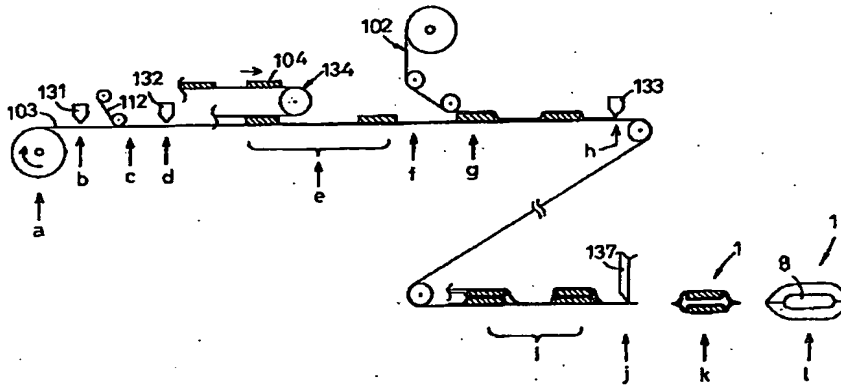
【図8】



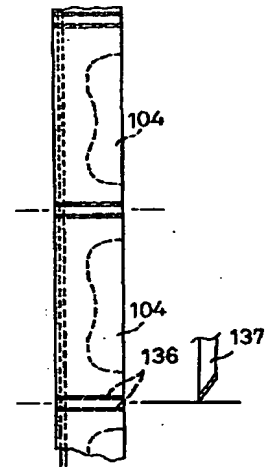
【図13】



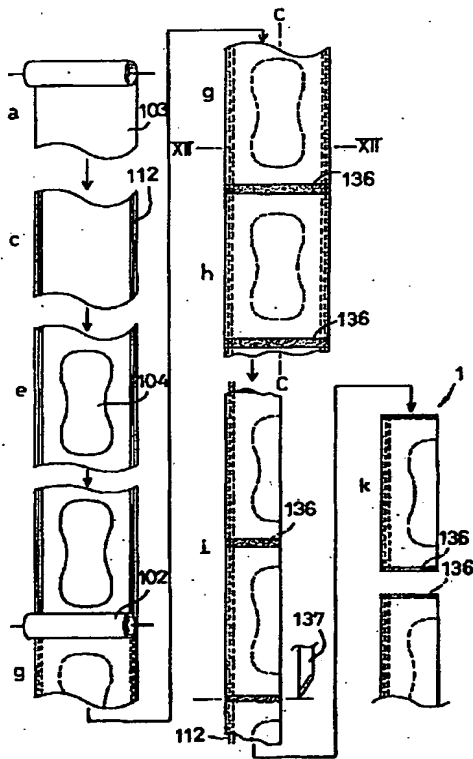
【図10】



【図14】



【図11】



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